

BIPOLAR PLATE WITH TWO-PASS ANODE

ABSTRACT OF THE INVENTION

A fuel cell bipolar plate includes first and second plates with ribs defining anode and cathode flow channels. The plates are nested so as to define a plurality of center flow channels. First and second edge areas are formed at ends of the plates. A plurality of first internal fuel manifolds is formed in the first edge area and is in fluid communication with the center flow channels. A plurality of second internal fuel manifolds is formed in the second edge area and is in fluid communication with the anode flow channels. A turnaround plenum is formed in the second edge area and is in fluid communication with the center flow channels and the anode flow channels.